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<p>(21) International Application Number: PCT/GB99/02863</p> <p>(22) International Filing Date: 1 September 1999 (01.09.99)</p> <p>(30) Priority Data: 98307594.6 18 September 1998 (18.09.98) EP</p> <p>(71) Applicant (<i>for all designated States except US</i>): PHILIP MORRIS PRODUCTS INC. [US/US]; 3610 Commerce Road, Richmond, VA 23234 (US).</p> <p>(72) Inventors; and (75) Inventors/Applicants (<i>for US only</i>): LEWIS, Michael, Vincent [GB/GB]; 24 Berther Road, Hornchurch, Essex RM11 3HS (GB). GREEN, Robert, John [GB/GB]; 131a, Ravensbourne Avenue, Bromley, Kent BR2 0AZ (GB). CADGE, Keith, John [GB/GB]; 90 Moulsham Drive, Chelmsford, Essex CM2 2PY (GB). LOUGHREY, Keith, Charles [GB/GB]; 21 The Grove, Bexley Heath, Kent DA6 8HD (GB). DAVIS, David, Thomas [GB/GB]; 4 Edison Grove, Plumstead, London SE18 2DN (GB). WYKES, Paul [GB/GB]; 61 Betterton Road, Rainham, Essex RM13 8NB (GB). SIMMS, Malcolm, Kenneth [GB/GB]; 34 Blithdale Road, Abbey Wood, London SE2 9HJ (GB).</p>		<p>(74) Agents: LLOYD, Patrick et al.; Reddie & Grose, 16, Theobalds Road, London WC1X 8PL (GB).</p> <p>(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).</p> <p>Published With international search report.</p>	
<p>(54) Title: CIGARETTE MANUFACTURING MACHINE AND CONTROL SYSTEM THEREFOR</p> <p>(57) Abstract</p> <p>A cigarette manufacturing apparatus comprises a tobacco rod maker for making double length tobacco rods, a tipper for applying filters to tobacco rods to form filter tipped cigarettes, and a transfer apparatus for transferring double length tobacco rods from the rod maker to the tipper. Each of the tipper and the rod maker comprises a plurality of field devices for monitoring and/or affecting parameters of the rod maker, the tipper or the cigarettes being manufactured. A motion controller controls a plurality of synchronised motors. A PC based controller controls the motion controller, the devices on the tipper and the rod maker and communicates with an HMI which is running on the same or a separate PC. The devices and the controller are linked by a field bus. The HMI PC and the motion controller are connected to the system controller either over their own links or via the fieldbus.</p>			